

WHAT IS CLAIMED IS:

- 1           1.     A cannula, comprising:  
2                     a body having a proximal end and a distal end, the body  
3     having a wall defining a lumen extending from the proximal end to the  
4     distal end, the lumen having a longitudinal axis; and  
5                     a plurality of apertures in the wall interconnected with the  
6     lumen, wherein each of the apertures has a longer major axis and a  
7     shorter minor axis, and wherein the longer major axis is perpendicular to  
8     the longitudinal axis of the lumen.
- 1           2.     The cannula of claim 1, wherein the cannula is a venous  
2     cannula.
- 1           3.     The cannula of claim 1, wherein the apertures are eye-  
2     shaped.
- 1           4.     The cannula of claim 1, wherein the apertures are oval.
- 1           5.     The cannula of claim 1, wherein the apertures are a shape  
2     defined by first and second arcuate portions that intersect with one  
3     another at two corners.
- 1           6.     The cannula of claim 1, wherein the apertures are arranged  
2     into a plurality of rows generally extending along the longitudinal axis of  
3     the lumen.
- 1           7.     The cannula of claim 6, wherein the rows are evenly  
2     distributed on the body and the apertures of adjacent rows are offset  
3     such that the apertures in the adjacent rows are different distances from  
4     a distal tip of the body.

1           8.     A cannula, comprising:  
2                     a body having a proximal end and a distal end, the body  
3     having a wall defining a lumen extending from the proximal end to the  
4     distal end, the lumen having a longitudinal axis; and  
5                     a plurality of apertures in the wall, wherein the apertures are  
6     eye-shaped.

1           9.     The cannula of claim 8, wherein the cannula is a venous  
2     cannula.

1           10.    The cannula of claim 8, wherein each of the apertures has a  
2     longer major axis and a shorter minor axis, and wherein the longer major  
3     axis is perpendicular to the longitudinal axis of the lumen.

1           11.    The cannula of claim 10, wherein the apertures are a shape  
2     defined by first and second arcuate portions that intersect with one  
3     another at two corners.

1           12.    The cannula of claim 8, wherein the apertures are arranged  
2     into four rows generally extending along the longitudinal axis of the  
3     lumen.

1           13.    The cannula of claim 12, wherein the rows are evenly  
2     distributed on the body and the apertures of adjacent rows are offset  
3     such that the apertures in the adjacent rows are different distances from  
4     a distal tip of the body.

1           14.    A method of making a cannula, comprising the steps of:  
2                     forming a cannula body having a wall defining a lumen;  
3                     bending the cannula body in a first direction such that the  
4     cannula body has a concave side and a convex side;

5                   punching an oval aperture into the concave side of the body;  
6    and  
7                   straightening the cannula body.

1           15.   The method of claim 14, wherein the wall is formed by  
2   extruding a plastic material.

1           16.   The method of claim 15, wherein the plastic material is  
2   polyurethane.

1           17.   The method of claim 14, wherein the body is formed by a dip  
2   molding process.

1           18.   The method of claim 14, wherein the cannula is a venous  
2   cannula.

1           19.   The method of claim 14, wherein the oval aperture has a  
2   longer major axis and a shorter minor axis, and wherein the longer major  
3   axis is perpendicular to a longitudinal axis of the lumen.

1           20.   The method of claim 14, further comprising the step of  
2   punching a first row of oval apertures extending along the lumen into the  
3   concave side of the body before straightening the cannula body.

1           21.   The method of claim 20, further comprising:  
2                   bending the cannula body in a second direction such that a  
3   different portion of the wall forms the concave side of the body; and  
4                   punching a second row of oval apertures extending along the  
5   lumen in the concave side of the body.

1           22.   The method of claim 21, wherein the first and second rows  
2   are offset such that each aperture is a different distance from a distal tip  
3   of the body.